

which the passivating substance X is introduced after the patterning of the silicon layer by implantation into a buried oxide layer;

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Figs. 4a to 4f are diagrammatic vertical sectional views of a sequence with a fourth design variant of the invention, in which the passivating substance X is introduced after the patterning of the silicon layer by implantation into the silicon layer, and

Figs. 5a to 5e are diagrammatic vertical sectional views of a BESOI sequence in which a passivating substance X is introduced before the joining of two silicon layer.--

Insert the following paragraph into line 24 on page 19 --

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A further possibility is to introduce the passivating substance X into the SOI semiconductor structure through the use of a diffusion step, which is illustrated in Figs. 5a -5e. A suitable fabrication method for this purpose, for SOI semiconductor structures, is known in the art as a BESOI (Bonded Etched-back Silicon on Insulator) method. In this method, two silicon semiconductor substrates are firstly provided (Fig. 5a). A surface oxide layer is then formed on each one of the two silicon semiconductor substrates (Fig. 5b). A passivating substance X is introduced into at least one of the oxide layers before or after an oxidation step

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performed on one of the silicon semiconductor substrates (Fig. 5c). The two silicon semiconductor substrates are then joined by contacting the two oxide layers (Fig. 5d) and one of the silicon semiconductor substrates is partially removed for forming the monocrystalline silicon layer (Fig. 5e).--

In the Claims:

Cancel claims 10-15.

Enter The Following New Claims:

-- 16. A method of fabricating a semiconductor configuration, which comprises the following steps:

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fabricating a semiconductor structure having a base layer, an insulation layer, a monocrystalline silicon layer, and an interface between the insulation layer and the monocrystalline silicon layer;

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introducing a passivating substance X into the monocrystalline silicon layer, during or after the fabrication of the semiconductor structure; and

heat-treating the semiconductor structure with the passivating substance X for causing the passivating substance X to diffuse both to the interface and to a surface of the monocrystalline silicon layer opposite to the interface.